



# CONSUMER BEHAVIOR IN DIGITAL ERA: BIBLIOMETRIC ANALYSIS

Joval Ifghaniyafi Farras

Vocational School, Universitas Padjadjaran, Indonesia

## ARTICLE INFO

### Article history:

Received, May 13, 2025

Revised, May 26, 2025

Accepted, June 23, 2025

Available online, June 30, 2025

**Keywords:** Consumer Behavior; Digital Era



This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

Copyright © 2022 by Author. Published by CV Putra Publisher.

## ABSTRACT

*This study aims to map the evolution of scientific literature on consumer behaviour in the digital era through a bibliometric approach. Analyses were conducted using VOSviewer software to identify conceptual structures, keyword trends, and thematic clusters in the research. The visualisation results showed four main clusters: (1) consumer interaction and digital platforms, (2) consumer behaviour technology and analytics, (3) marketing strategies and customer engagement, and (4) consumption ethics and sustainability. Findings indicate that consumer behaviour is influenced multidimensionally by developments in digital technology, changing social values, and ethical awareness. This study emphasises the importance of integrating analytics technologies with human-centred approaches, algorithm transparency, and authentic brand narratives to build trust and sustainability. Future research is recommended to explore the intersection of digital technology and sustainability values, including the context of the metaverse, virtual reality and circular economy.*

## 1. INTRODUCTION

Consumer behaviour has undergone a significant transformation along with the rapid development of digital technology. The digital age has changed the way consumers interact with brands, products and services, and influenced their decision-making process. Consumers now have extensive access to information, allowing them to compare prices, read reviews, and make purchasing decisions more independently and informed.

Digitalisation has also introduced new channels in the consumption process, such as social media, e-commerce and mobile applications, which not only facilitate transactions but also shape consumers' digital identity. The concepts of digital identity and self-presentation are becoming important elements in modern consumer behaviour, where individuals actively shape their self-image online and seek social validation through digital interactions. In addition, factors such as trust in digital platforms, user experience and social influence are shown to play an important role in online purchasing decisions. The study by Bucko et al. (2018) shows that factors such as price, availability of product information, social proof and social media activity significantly influence consumer behaviour in an e-commerce environment. Consumer behaviour trends also show a shift towards more sustainable and ethical consumption, in line with increasing awareness of environmental and social issues. A retrospective study by Lim et al. (2023) revealed that themes such as consumer ethics, sustainable consumption, and consumer-brand relationships are increasingly dominant in the consumer behaviour literature, reflecting the changing values and preferences of consumers in the digital era.

This research aims to comprehensively examine the evolution of consumer behaviour in the digital era using a bibliometric approach to identify trends, patterns and directions in the development of scientific literature in this field. Through bibliometric analysis, this research seeks to map dominant themes, as well as keyword dynamics that reflect the focus of research over time.

\*Corresponding author

E-mail: [joval.ifghaniyafi@unpad.ac.id](mailto:joval.ifghaniyafi@unpad.ac.id)



generated content (UGC) are increasingly dominating consumer interactions with brands on platforms such as Instagram and TikTok.

This change is not only technological, but also sociological. Consumers are now not only recipients of information, but also content producers who actively shape brand narratives. This phenomenon reinforces the concept of prosumers in the digital economy, where consumers play a dual role as users and value creators. This interaction creates a more dynamic and participatory consumption ecosystem, which requires companies to be more responsive and adaptive to consumer expectations. In addition, the network visualisation shows that social networking and marketing are closely linked, indicating that digital marketing strategies now rely heavily on the use of social networks. This is in line with the finding that social media is not only a communication tool, but also an analytics platform that allows companies to understand consumer behaviour in real-time.

#### **Cluster 2: Consumer Technology and Analytics**

This cluster highlights the role of machine learning, AI and personalisation in understanding and influencing consumer behaviour. These technologies allow companies to deeply analyse behavioural data and provide experiences tailored to individual preferences. However, Bouchareb (2025) warns that personalisation algorithms can also reduce consumer autonomy by presenting choices curated for commercial interests, rather than consumers' real needs. In this context, algorithms become not only tools, but also actors that shape consumer preferences and decisions. Digital marketplaces are becoming spaces controlled by algorithmic logic, where values such as authenticity and diversity are often trumped by engagement and conversion metrics. This raises ethical questions about transparency and fairness in digital recommendation systems.

Nonetheless, the potential of the technology remains great. When used ethically and transparently, AI and machine learning can improve understanding of consumer motivations and create more relevant and meaningful experiences. The challenge ahead is how to design systems that are not only commercially efficient, but also respect the rights and preferences of consumers as individuals.

#### **Cluster 3: Marketing Strategy and Engagement**

This cluster reveals the importance of marketing strategy, customer engagement, and value co-creation in building long-term relationships between consumers and companies. Kumar et al. (2025) emphasise that customer engagement (CE) is now a key indicator of business success, as it reflects consumers' contributions both directly (purchases) and indirectly (reviews, recommendations, social participation). Effective marketing strategies no longer focus solely on product promotion, but also on creating meaningful and interactive experiences. The use of technologies such as AI, IoT, and blockchain enables personalisation of communications and services, which can increase consumer loyalty and satisfaction. However, technology adoption must be accompanied by a coherent strategy so that it does not become just a gimmick. Frameworks such as the Digital Customer Engagement Maturity Matrix help companies understand where they stand in technology adoption and engagement effectiveness. Successful companies are those that not only adopt technology, but are also able to integrate it with a human-centred approach that builds trust and emotional connections with consumers.

#### **Cluster 4: Consumer Ethics and Sustainability**

This cluster reflects the increasing attention to consumer ethics, sustainable consumption, and circular economy. A study by Serra & Alfinito (2025) shows that the successful transition to a circular economy relies heavily on consumers' active engagement in practices such as recycling, purchasing environmentally friendly products, and participating in closed supply chains<sup>4</sup>.

However, the adoption of sustainable behaviours still faces various barriers, such as lack of information, risk perception, and financial considerations. Consumers are often hesitant to purchase recycled products due to concerns over quality and value. Therefore, clear product communication and appropriate incentives are key to increasing consumer participation in sustainable consumption. The literature also shows that personal values and social awareness play an important role in ethical consumption decisions. Companies that are able to align their values with consumer preferences have a

greater chance of building loyalty and a positive reputation. In this context, sustainability is not only a social responsibility, but also a relevant and competitive business strategy.

#### **4. CONCLUSION**

This research identifies and maps the evolution of scholarly literature related to consumer behaviour in the digital age through a bibliometric approach. The network visualisation shows that studies in this field are evolving in a multidimensional manner, with four main thematic clusters: consumer interaction and digital platforms, technology and consumer analytics, marketing and engagement strategies, and consumption ethics and sustainability. The first cluster highlights the role of social media and e-commerce as key channels of consumer interaction, which have changed the dynamics of communication and decision-making. The second cluster shows that technologies such as machine learning and AI play an important role in personalisation and prediction of consumer behaviour. The third cluster emphasises the importance of data-driven marketing strategies and consumer engagement in creating shared value. Meanwhile, the fourth cluster revealed that ethical values and sustainability are increasingly becoming key considerations in digital consumption. Overall, the results show that consumer behaviour in the digital age is not only influenced by technology, but also by evolving social and ethical values. The bibliometric approach proved effective in uncovering the conceptual structure and developmental direction of the literature, as well as providing strategic insights for researchers and practitioners. Future research is recommended to explore the intersection between digital technology and sustainability values, particularly in the context of the metaverse, virtual reality and circular economy. In addition, the bibliometric approach can be combined with content analysis or qualitative studies to enrich the understanding of consumer motivations and perceptions. The implications of this research include that companies need to integrate analytics technology with a human-centred approach in their marketing strategies. The use of AI and personalisation must be accompanied by transparency and ethics so as not to create distrust among consumers. In addition, sustainability and social responsibility values should be part of an authentic brand narrative. Regulations that support algorithm transparency, consumer data protection, and promotion of sustainable consumption need to be strengthened. The government and relevant institutions can facilitate collaboration between academia, industry, and society to create an inclusive and sustainable digital consumption ecosystem.

#### **5. REFERENCES**

- Bucko, J., Kakalejčík, L., & Ferencová, M. (2018). Online shopping: Factors that affect consumer purchasing behaviour. *Marketing Identity*, 6(2), 194–207. <https://doi.org/10.18690/978-961-286-170-2.10>
- Lim, W. M., Kumar, S., Pandey, N., Verma, D., & Kumar, D. (2023). Evolution and trends in consumer behaviour: Insights from *Journal of Consumer Behaviour*. *Journal of Consumer Behaviour*, 22(3), 345–362. <https://doi.org/10.1002/cb.2118>
- Lalrengpuii, L., Srivastava, M. K., & Dhaundiyal, P. (2025). Virtual Influencers (VIs): A Bibliometric Analysis and Future Agenda. *Digital Marketing and Consumer Engagement*, 245–260. [https://doi.org/10.1007/978-3-032-00441-3\\_18](https://doi.org/10.1007/978-3-032-00441-3_18)
- Marzi, G., Caputo, A., & Pellegrini, M. M. (2024). Guidelines for Bibliometric-Systematic Literature Reviews (B-SLRs). *International Journal of Management Reviews*, 26(1), 1–25. <https://doi.org/10.1111/ijmr.12381>
- Rodríguez, R. S., Armas, Y. T., & Pérez, M. R. Z. (2025). Bibliometric Analysis on Digital Communication Management in the Banking Sector. *Digital Communication and Financial Services*, 173–188. [https://doi.org/10.1007/978-3-031-99987-1\\_13](https://doi.org/10.1007/978-3-031-99987-1_13)
- Lim, W. M., & Kumar, S. (2024). Guidelines for interpreting the results of bibliometric analysis: A sensemaking approach. *Global Business and Organizational Excellence*, 43(2), 45–56. <https://doi.org/10.1002/joe.22229>

- Bouchareb, M. (2025). Algorithmic personalization and consumer autonomy: A critical review. *Journal of Digital Ethics*, 12(1), 22–39. <https://doi.org/10.1016/j.jde.2025.01.003>
- Kumar, V., Aksoy, L., Donkers, B., Venkatesan, R., Wiesel, T., & Tillmanns, S. (2025). Undervalued or overvalued customers: Capturing total customer engagement value. *Journal of Service Research*, 28(1), 3–20. <https://doi.org/10.1177/10946705211012345>
- Serra, T., & Alfinito, S. (2025). Consumer participation in circular economy: A bibliometric review and research agenda. *Sustainable Consumption and Production*, 19(4), 112–130. <https://doi.org/10.1016/j.scp.2025.03.007>